

OWH67B Series

Single-Channel Bidirectional Programmable DC Power Supply



Key Features

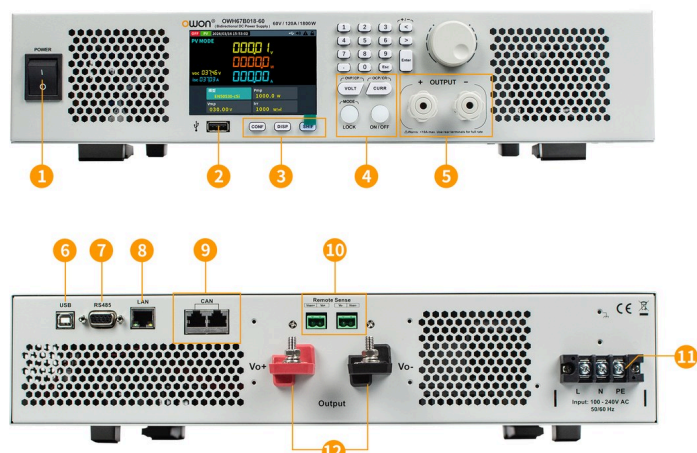
- Source/load integrated architecture, Source mode (CC / CV / CP), Load mode (CC / CV / CR / CP)
- 2U/4U rack-mounted structure, compliant with standard 19-inch cabinet installation
- Bidirectional power architecture, seamless switching between source and load modes
- High-precision output (0.05%), supporting a wide power range up to 60V / $\pm 240A$ / $\pm 3600W$
- Supports battery simulation: built-in 7 high-fidelity battery characteristic models
- Built-in bleed circuit to ensure no residual high voltage at shutdown
- Built-in photovoltaic simulation function, supporting SAS models such as EN50530 and Sandia
- High setting/readback resolution: 10mV/10mA
- Full digital control integrated with OVP, OCP, OPP protection
- Supports USB Device, USB Host, LAN, RS485 communication interfaces, and SCPI

Product Introduction

The OWH67B series single-channel bidirectional DC power supply is a high-precision laboratory/industrial-grade instrument designed for advanced testing, battery simulation, photovoltaic simulation and automation applications. Delivering up to 60V / $\pm 240\text{A}$ / $\pm 3600\text{W}$, it features a source/load integrated architecture and bidirectional power design, realizing seamless switching between different working modes.

Overview

OWH67B018-60:

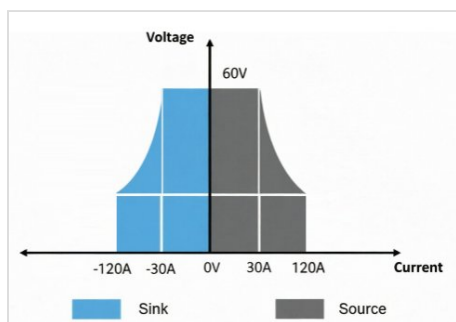


OWH67B036-60:



1. Power Switch
2. USB data interface
3. System Function Keys
4. Function Keys
5. Output Terminal
6. USB Device Port

7. RS-485 Interface
8. LAN Interface
9. CAN Interface
10. Remote Compensation
11. AC Power Input Terminal
12. DC Output Terminal



A Automatic Source-Load Seamless Switching

Integrates the functions of both a DC source and a regenerative electronic load. Featuring two-quadrant operation, the system supports fast, smooth and automatic online seamless switching between "Source" and "Sink" modes with zero delay, suppressing voltage or current overshoots.



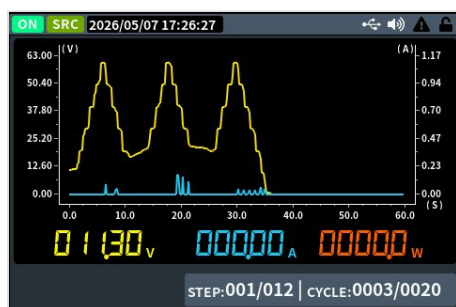
B High-precision Voltage / Current Control

Wide output range (60V / $\pm 240A$ / $\pm 3600W$), high-precision voltage/current control capability, with selectable constant voltage, constant current and constant power modes.



C Regenerative Electronic Load

Supports CC, CV, CR and CP load modes. With energy recovery efficiency of up to 89%+, it significantly reduces laboratory heat emissions and electricity costs.



D Powerful List Mode

Up to 100-step sequence programming via the front panel or PC software. CSV file import via USB enables flexible generation of complex arbitrary sequences.



E Battery Simulation

7 built-in high-fidelity battery models (LFP, NMC, LMO, LCO, LTO, NiMH, Lead-Acid) for precise simulation of diverse battery chemistries and discharge characteristics.

Photovoltaic Simulation (optional)

The OWH67B Series supports multiple SAS (Solar Array Simulation) models, including built-in EN50530, Sandia, and custom curves.

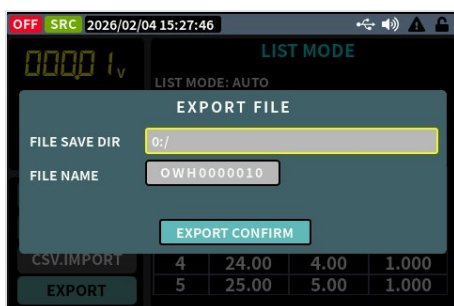


F Photovoltaic Simulation (optional)

Supports multiple SAS models including built-in EN50530, Sandia and custom curves. With optional PV simulation software, multi-channel MPPT tracking and synchronized control are possible. Ideal for grid-tied/string inverters, PV-storage systems and PCS.

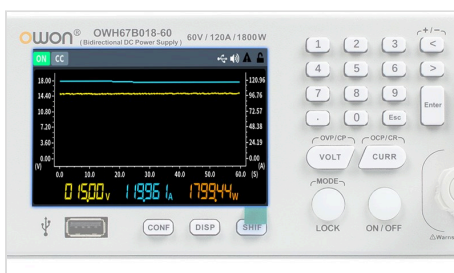
G Monitoring & Efficient Data Management

USB screen capture and continuous data logging provide full traceability in extended test cycles. CSV file management allows storage and one-click recall of test sequences and configurations.



H Waveform Display

Real-time display of voltage and current readback curves for the last 60 seconds, enabling precise capture of anomalies.



Integrated Control Platform

Tailored for the OWH67B Series, this software integrates precision remote control, battery simulation, and professional SAS PV simulation.



I Integrated Control Platform

PC software integrating precision remote control, battery simulation and SAS PV simulation, with seamless sourcing/sinking transitions, real-time monitoring and complex LIST programming.

Applications

- Battery Charge/discharge Testing: 48V ESS packs, UAV batteries, E-bike/Scooter power batteries
- New Energy Vehicles: 48V MHEV, OBC, DC-DC converters, automotive electronics
- PV & Energy Storage: Micro-inverters, PCS, 48V storage systems, portable power stations
- Motor & Drive Testing: Cordless power tools, industrial low-voltage servo motors
- R&D & Education: Power electronics labs for Electrical Engineering, Automation and New Energy

Main Specifications

The instrument must be operated continuously for more than 30 minutes at the specified operating temperature to achieve the following specifications.

Model		OWH67B018-60	OWH67B036-60
Rated Output (0°C-40°C)	Output voltage	0 - 60V	0 - 60V
	Output current	-120A ~ 120A	-240A ~ 240A
	Output power	-1.8kW ~ 1.8kW	-3.6kW ~ 3.6kW
Input	Volt/freq./Curr	100V-240Vac; 45Hz-65Hz; 13Arms Max	100V-240Vac; 45Hz-65Hz; 26Arms Max
Load regulation (% of output+offset) ^[1]	CV	≤0.03% +0.03%FS	
	CC	≤0.05% +0.05%FS	
Line regulation (% of output+offset)	CV	≤0.03% +0.03%FS	
	CC	≤0.05% +0.05%FS	
Setting resolution	Voltage/Current	10mV/10mA	
Readback resolution	Voltage/Current	10mV/10mA	
Setting accuracy	Voltage	≤0.05% +0.05%FS	
	Current	≤0.1% +0.1%FS	
Readback accuracy	Voltage	≤0.05% +0.05%FS	
	Current	≤0.1% +0.1%FS	
Noise & ripple ^[2]	Voltage/Current	≤80mVp-p; ≤120mArms	≤80mVp-p; ≤200mArms
Temperature drift (0°C-40°C)	Voltage/Current	100ppm/°C (Voltage), 200ppm/°C (Current)	
Dynamic (10%-90% rated load)		≤5.0ms	
MOV		2.6V@120A	3V@240A
Working temperature		0-40°C	
Display		3.9-inch TFT LCD	
Interface		USB, LAN, RS485	
Dimensions		428mm(W) x 88mm(H) x 446mm(D)	428mm(W) x 176mm(H) x 446mm(D)
Weight		Approx. 12kg	Approx. 24kg

[1] Voltage regulation is measured at the output remote sense points. [2] 20MHz noise bandwidth; measured at the output terminals with a 10uF electrolytic capacitor and a 0.1uF ceramic capacitor in parallel across the output. Specifications subject to change without prior notice.

Ordering Information

Ordering Information	Order No.
Main Unit Models	
0-60V, -120A - 120A, -1800W - 1800W, 1CH	OWH67B018-60
0-60V, -120A - 120A, -1800W - 1800W, 1CH, Photovoltaic Simulation	OWH67B018-60-S
0-60V, -240A - 240A, -3600W - 3600W, 1CH	OWH67B036-60
0-60V, -240A - 240A, -3600W - 3600W, 1CH, Photovoltaic Simulation	OWH67B036-60-S
Standard Accessories	
Quick Guide	—
Power cord	7Power-1/7Power-4(EU)
Data cable	7ULD10
Remote voltage sense terminals	7Term-1
AC terminal Protective cover	7cover-1
RS485 communication terminal (OWH67B036-60 only)	7Term-5
Optional Accessories	
DC terminal Protective cover	7cover-2
Handle	7L-B